



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/510,334 | 02/22/2000 | Toshikazu Ohshima | 2355.11105 | 1732 |

5514 7590 05/06/2002

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

WHITE, CARMEN D

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3714

DATE MAILED: 05/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/510,334

Applicant(s)

OHSHIMA, TOSHIKAZU

Examiner

Carmen D. White

Art Unit

3714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Continued Prosecution Application

The request filed on February 22, 2002 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/510,334 is acceptable and a CPA has been established. An action on the CPA follows.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 4, 7, 12, 14, 18-19, 21-22, 29, 31, 33-34, 38-39, 45, 49, 52 and 56-57 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 4, 7, 12, 14, 19, 21, 22, 31, 33, 34, 39 recite the language "location/posture". It is not clear whether Applicant is using the two terms interchangeably or whether it is either the Applicant intends for the examiner to interpret this as location or posture.

Claim 1 recites the limitations "the basis" and "the absolute positions" in lines 5 and 6, respectively. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitations "the basis" and "the absolute positions" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitations "the basis" and "the determined user instruction" in lines 7 and 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 29 recites the limitation "the basis" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 38 recites the limitation "the plurality of decomposed operands" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Claim 45 recites the limitations "the basis" and "the outputs" in lines 7 and 8, respectively. There is insufficient antecedent basis for this limitation in the claim.

Claim 49 recites the limitation "the location change velocity" in 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 52 recites the limitations "the first detection step", "the second detection step", "the estimation step", "the basis", "the outputs" and "the output step" in lines 1, 3, 5, 6, 7, and 9, respectively. There is insufficient antecedent basis for this limitation in the claim.

Claim 56 recites the limitations "the step of analyzing" and "the location change velocity" in lines 2 and 3, respectively. There is insufficient antecedent basis for this limitation in the claim.

Claim 57 recites the limitations "the step of determining", "the basis" and "the corresponding command" in lines 2 and 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-11, 14-26, 29-38 and 41-58 are rejected under 35 U.S.C. 102(b) as being anticipated by Latypov (5,846,134).

Regarding claims 1-9, 14, 17-24, 29-36, 41-49 and 52-56, Latypov teaches a gaming system that includes a first sensor for detecting a location or posture of a head of a player or user; a second sensor for detecting a location or posture of a hand or arm of a player or user; and a means for estimating and generating action information of the player or user on the basis of a relative location or posture of the hand or arm with respect to the location or posture of the head; and image generating means for generating an image on the basis of said user instruction (Fig. 1; col. 5, lines 28-43).

Regarding claims 10-11, 25-26, 37-38, 50 and 57, Latypov further teaches a computer for storing values corresponding to the positions of the first and second portions as they relate to each other and generates instruction operands in the virtual gaming environment that correspond to the player's movement (col. 5, lines 8-13 and lines 35-40; Fig. 1, #1, #12).

Regarding claims 15-16, 51 and 58, Latypov further teaches a head-mounted display for displaying the image of a game scene (col. 5, lines 13-19).

Claims 1-11, 13-26, 28-38 and 40-58 are rejected under 35 U.S.C. 102(e) as being anticipated by Ahdoot (5,913,727).

Regarding claims 1-9, 14, 17-24, 29-36, 41-49 and 52-56, Ahdoot teaches a gaming system that includes a first sensor for detecting a location or posture of a head of a player; a second sensor for detecting a location or posture of a hand or arm; and a means for estimating an action of the player on the basis of a relative location or posture of the hand or arm with respect to the location or posture of the head; and image generating means for generating an image on the basis of said user instruction (Fig. 1, #30, #34, #48, #46, #47, #60; col. 7, lines 1-35).

Regarding claims 10-11, 25-26, 37-38, 50 and 57, Ahdoot further teaches a computer for storing values corresponding to the positions of the first and second portions as they relate to each other and generates instruction operands in the virtual gaming environment that correspond to the player's movement (Fig. 2, #50A; abstract).

Regarding claims 13, 28 and 40, Ahdoot further teaches the use of a glove (that covers the fingers of the player) that contains sensors (Fig. 1, #46).

Regarding claims 15-16, 51 and 58, Ahdoot further teaches a head-mounted display for displaying the image of a game scene (Fig. 1, #60; col. 5, lines 55-57).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12-13, 27-28, and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Latypov.

Regarding claims 13, 28, 40, Latypov teaches all the limitations of the claims as discussed above. While Latypov teaches a plurality of sensors located on the hand, head, body, feet, etc. (col. 5, lines 35-43). Latypov lacks disclosing the specific sensing of a bent angle of a finger. It would have been obvious to a person of ordinary skill in the art to include the sensing of the bending of a finger in the hand sensors of Latypov to make the motion detection more accurate. Thus making the virtual gaming experience more authentic.

Regarding claims 12, 27 and 39, Latypov teaches all the limitations of the claims as discussed above. While Latypov teaches a plurality of sensors being located on the body of the player to sense movement of the player's motion and the connection of these sensors to a computer, which generates the commands and displays output to the player, Latypov is silent on the feature of sensing when the player's line of sight is pointing to the hand and outputting a user instruction for operation guidance. However, it is well known in computer gaming systems to generate help commands in response to player inputs in order to assist the player during the game so that the player does not waste his or her time/and or money while playing the game. This feature is merely a matter of programming the software of the game to produce a help command in response to sensor output. Thus, it would have been obvious to a person of ordinary skill in the art at the time of the invention to include this feature in Latypov.

Claims 12, 27, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahdoot.

Regarding claims 12, 27 and 39, Ahdoot teaches all the limitations of the claims as discussed above. While Ahdoot teaches a plurality of sensors being located on the body of the player to sense movement of the player's motion and the connection of these sensors to a computer, which generates the commands and displays output to the player, Ahdoot is silent on the feature of sensing when the player's line of sight is pointing to the hand and outputting a user instruction for operation guidance. However, it is well known in computer gaming systems to generate help commands in response to player inputs in order to assist the player during the game so that the player does not waste his or her time/and or money while playing the game. This feature is merely a matter of programming the software of the game to produce a help command in response to sensor output. Thus, it would have been obvious to a person of ordinary skill in the art at the time of the invention to include this feature in Ahdoot.

Examiner's Response to Applicant's Remarks

Applicant argues that the feature of *estimating* a command corresponding to a user's action being determined based on a change in the relative positions between a plurality of portions of the user is not taught by the prior art of record (Ahdoot or Latypov). However, the examiner disagrees. Ahdoot clearly teaches a virtual reality gaming system in which the player or user has sensors on the head, hand and arm portion of the body, as well as various other areas of the body (Fig. 1, #30, #34, #48, #46, #47, #60; col. 7, lines 1-35). The sensors on the various parts of the body of the user of Ahdoot determine whether the player is kicking, punching, etc. (col. 7, lines 31-32). The movements of the player or user of Ahdoot are used to determine the

character's movements and actions within the virtual gaming environment. Similarly, Latypov teaches a plurality of sensors on various body portions of a player or user (last 4 lines of abstract; Fig. 1, #13, #14, #15, #16; col. 5, lines 28-43). ***The sensors of both Ahdoot and Latypov sense the movement of each body portion and their movement relative to each other in order to determine accurate position coordinates for the player in the virtual game space.***

Applicant has amended the independent claims to include the language estimating (instead of analyzing) the action of the user on the basis of the absolute positions of the first and second sensors and a relative position of the second portion with respect to the first portion. Applicant further argues that the estimation feature is a means of determining the intention for player's movements and actions. However, Applicant is arguing language and features that cannot be obtained from the instant claim language. Applicant has not disclosed how the user's intent can be measured. The language of estimating and determining intent are not equivalent. The examiner has interpreted this feature as sensing the movement of the user's body portions in respect to each other. This is inherent in the output that is determined in Ahdoot and Latypov. The player's actions in order to form particular body movements include the sensing of the movement of one body part with respect to another.

USPTO Contact Information

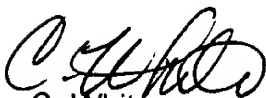
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carmen D. White whose telephone number is 703-308-

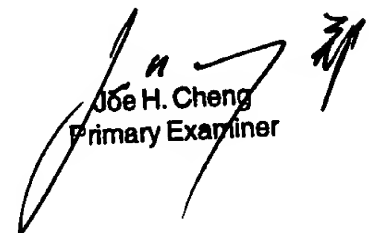
Art Unit: 3714

5275. The examiner can normally be reached on Monday through Friday, 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jessica Harrison can be reached on 703-308-2217. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7768 for regular communications and 703-305-3579 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1078.


C. White
Patent Examiner


Joe H. Cheng
Primary Examiner